

IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Manish Sharma, Janice H. Nickel  
Confirmation No.:  
Application No.:  
Examiner:  
Filing Date: Feb. 10, 2004  
Group Art Unit:  
Title: MULTILAYER PINNED REFERENCE LAYER FOR A MAGNETIC STORAGE DEVICE

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

This Information Disclosure Statement is submitted:

- ☒ under 37 CFR 1.97(b), or  
(Within three months of filing national application; or date of entry of national application; or before mailing date of first office action on the merits; whichever occurs last)
- ☐ under 37 CFR 1.97(c) together with either a:  
☐ Statement under 37 CFR 1.97(e), or  
☐ a \$180.00 fee under 37 CFR 1.17(p), or  
(After the CFR 1.97 (b) time period, but before final action or notice of allowance, whichever occurs first)
- ☐ under 37 CFR 1.97 (d) together with a:  
☐ Statement under 37 CFR 1.97(e)(1) or (2), and  
☐ a \$180.00 fee set forth in 37 CFR 1.17(p).  
(Filed after final action, a notice of allowance, on or before payment of the issue fee)

Please charge to Deposit Account **08-2025** the sum of \$0.00. At any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account **08-2025** pursuant to 37 CFR 1.25.

☒ Applicant(s) submit herewith Form PTO 1449 - Information Disclosure Statement together with any required copies of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

☐ A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on PTO Form 1449, as presently understood by the individuals(s) designated in 37 CFR 1.56 (c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on form PTO 1449 and is enclosed herewith.

It is requested that the information disclosed herein be made of record in this application.

"Express Mail" label no. ER497998367US

Date of Deposit Feb. 10, 2004

I hereby certify that this is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to: Commissioner for Patents, Alexandria, VA 22313-1450

By

Typed Name: Daniel W. Roberts

Respectfully submitted,

Manish Sharma, Janice H. Nickel

By

Daniel W. Roberts

Attorney/Agent for Applicant(s)  
Reg. No. 52,172

Date: Feb. 10, 2004

FORM PTO-1449

LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION DISCLOSURE  
STATEMENT

(Use several sheets if necessary)

ATTY. DOCKET NO.

100202557-1

APPLICATION NO.

CONFIRMATION NO.

APPLICANT

Manish Sharma, Janice H. Nickel

FILING DATE

Feb. 10, 2004

GROUP

## REFERENCE DESIGNATION

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
	1A	2003/0169620	Sep. 11, 2003	Sharma et al.	
	1B	2003/0057461	Mar. 27, 2003	Tran et al.	
	1C	6,358,757	Mar. 19, 2002	Anthony	
	1D				
	1E				
	1F				
	1G				
	1H				
	1I				
	1J				
	1K				

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
	1L					
	1M					
	1N					
	1O					
	1P					

## OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

	1Q	A.E. Berkowitz et al. "Exchange Anisotropy - A Review", Journal of Magnetizm and Magnetic Materials 200(1999) 552-570 (12 March 1999)
	1R	J. Nogues, Ivan K. Schuller "Exchange Bias", Journal of Magnetizm and Magnetic Materials 192(1999) 203-232 (5 March 1998)
	1S	

EXAMINER

DATE CONSIDERED